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Serial no. 10/736,155 - Hatfield et al.

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In the Claims

Add new claims 13 and 14 as follows:

1. (previously presented) A method for the reduction of proteolysis in ensiled crops comprising contacting a crop material to be ensilaged with an o-diphenol compound and polyphenol oxidase at the time of ensilaging in an amount effective to reduce the degree of proteolysis of the crop material.

2. (previously presented) The method of claim 1 wherein the amount of said o-diphenol and said polyphenol oxidase is sufficient to reduce the degree of proteolysis by at least 20%.

3. (previously presented) The method of claim 1 wherein the o-diphenol compound is applied to the crop material to be ensilaged at a rate ranging from about 5 to about 30 micromoles per gram fresh weight and the polyphenol oxidase is applied to the crop material to be ensilaged at a rate ranging from about 0.1 to about 1.0 unit per gram fresh weight.

4. (previously presented) The method of claim 1 wherein the crop material to be ensilaged is macerated to a conditioning index ranging from 30 to 60.

Serial no. 10/736,155 ~ Hatfield et al.

5. (previously presented) The method of claim 1 wherein the o-diphenol compound is selected from the group consisting of caffeic acid, catechol, chlorogenic acid, phasic acid, rosmarinic acid, caffeoyl tartrate, and caffeoyl glucose.

6. (cancelled).

7. (previously presented) A method for the reduction of proteolysis in ensiled crops comprising contacting a polyphenol oxidase transformed crop to be ensilaged with an o-diphenol compound at the time of ensilaging in an amount effective to reduce the degree of proteolysis in the crop.

8. (previously presented) The method of claim 7 wherein the quantity of said o-diphenol compound is sufficient to reduce the degree of proteolysis by at least 20%.

9. (cancelled).

10. (previously presented) The method of claim 7 wherein the crop to be ensilaged is macerated to a conditioning index ranging from about 30 to about 60.

Serial no. 10/736,155 - Hatfield et al.

11. (previously presented) The method of claim 7 wherein the o-diphenol compound is selected from the group consisting of caffeic acid, catechol, chlorogenic acid, phasic acid, rosmarinic acid, caffeoyl tartrate, and caffeoyl glucose.

12. (cancelled).

13. (new) The method of claim 1 wherein said crop material is selected from the group consisting of alfalfa, red clover, corn, wheat, triticale, rye, barley, oat, pea, sorghum, sudan, millet, and lentil.

14. (new) A method for the reduction of proteolysis in ensiled crops consisting essentially of contacting a crop material to be ensilaged with an o-diphenol compound and polyphenol oxidase at the time of ensilaging in an amount effective to reduce the degree of proteolysis of the crop material.